

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Junichi TAKEUCHI, et al.  
Title: AUTOREGRESSIVE MODEL LEARNING  
DEVICE FOR TIME-SERIES DATA AND A  
DEVICE TO DETECT OUTLIER AND CHANGE  
POINT USING THE SAME  
Appl. No.: Unassigned  
Filing Date: 07/16/2003  
Examiner: Unassigned  
Art Unit: Unassigned

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop PATENT APPLICATION  
Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the filing date of the application.

**RELEVANCE OF EACH DOCUMENT**

The relevance of listed documents is described in the present specification. All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date: July 16, 2003

FOLEY & LARDNER  
Customer Number: 22428



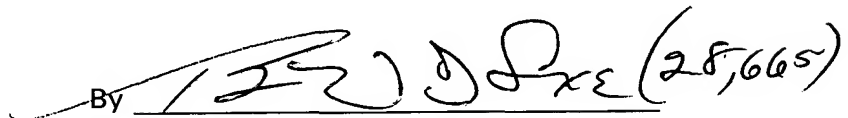
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PATENT TRADEMARK OFFICE

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By

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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: July 16, 2003 (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	Unassigned
				Filing Date	07/16/2003
				First Named Inventor	Junichi TAKEUCHI
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	1	of	1	Attorney Docket Number	040405-0363

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>6</sup>
	A1	P. BURGE, et al., "Detecting Cellular Fraud Using Adaptive Prototypes.", (Proceedings of AI Approaches to Fraud Detection and Risk Management), pp. 9-13, 1997.			
	A2	K. YAMANISHI, et al., "On-line Unsupervised Outlier Detection Using Finite Mixtures with Discounting Learning Algorithms", (Proceedings of the sixth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, ACM Press), pp. 320-324, 2000.			
	A3	U. MURAD, et al., "Unsupervised Profiling for Identifying Superimposed Fraud", (Proceedings of 3 <sup>rd</sup> European conference on Principles and Practice of Knowledge Discovery in Database), pp. 251-261, 1999.			
	A4	B. GUTHERY, "Partition Regression", in Journal of American Statistical Association, vol. 69, pp. 945-947, 1974.			
	A5	M. HUŠKOVÁ, "NONPARAMETRIC PROCEDURES FOR DETECTING A CHANGE IN SIMPLE LINEAR REGRESSION MODELS", <i>Applied Change Point Problems in Statistics</i> , Nova Science Publishers, Inc., 1995.			
	A6	V. GURALNIK, et al., "Event Detection from Time Series Data", (Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, ACM Press), pp. 32-42, 1999.			

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number or the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.